

Electronic Poster: Clinical track: Head and neck

EP-1027

Re treatment in previously irradiated neck. The different problems of relapsed and second cancers

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Purpose or Objective: Owing to legitimate fears concerning potentially devastating complications, the treatment of head and neck cancer in previously irradiated patient has been based on surgery for the best cases and chemotherapy for the inoperable ones. We review our series of 84 routinely re-(chemo)irradiated patients since 2000.

Material and Methods: Patients : 84 consecutive patients, mean age 60.47, previously treated by radio(chemo)therapy with a median delay between the the two irradiations of 36.3 months have been treated. 54 patients with relapses and 30 patients presenting second cancers . The mean follow-up is 66.45 months.

Methods : 42 patients were operated upon, (chemo)radiotherapy being used postoperatively for poor prognostic factors. 42 inoperable patients have been treated exclusively by radiochemotherapy. Before 2007, patients were treated by 2D techniques then by IMRT. 44 received concomitant platinum-based chemotherapy, 23 cetuximab and 17 radiotherapy alone.

Results: Results : median overall survival for the entire population is 19.61 months. Specific survival 23 months. Death causes : 40 the cancer itself, 9 patients complications et 11 other causes. Prognostic factors : age, sexe, performance status, Charlson score, location, type of resurgence (local, nodal or both), surgery, chemotherapy antecedents, type of concomitant treatment during the reirradiation, previous disabilities (tracheostomy, nasogastric tube) have been investigated. Only the type of resurgence is discriminant with a median survival time of 16.49 months for patients treated for a relapse and 32 months for those treated for a second cancer (Logrank $p=0.00464$). Complications : 9 deceased : 1 carotid blowout (with evolutive tumor), 3 late pneumoniae (patient NED), 3 tumoral hemorrhages (evolutive tumors) and 2 unknown complications. Late sequelae: 10 radionecrosis (7 osteoradionecrosis), 7 persistent dysphagia, 8 long term fistulas.

Conclusion: Conclusion :The survival in our series restricted to the second cancers is similar to that obtained in not previously irradiated patients and confirm some data of the literature. Thereby it is our belief that, if the acceptance of this strategy of treatment may merit further clinical trials for the relapsing tumor (however the results compare favorably with palliative chemotherapy), it becomes unethical not to give this chance for the second cancers in spite of the risk of severe complication.

EP-1028

The role of adjuvant external beam radiation therapy for advanced papillary thyroid cancer

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Purpose or Objective: the purpose of this study was to investigate the prognostic implication of adjuvant external beam radiation therapy on the locoregional control in patients with either locally advanced thyroid papillary carcinoma or cervical lymph node involvement.

Material and Methods: retrospective analysis was performed on 165 patients with locally advanced thyroid papillary

carcinoma (T4) or cervical lymph node involvement (N1b), who were treated between 2002 and 2011. Of these, 32 patients were treated with total thyroidectomy followed by adjuvant external beam radiation therapy and radioactive iodine treatment, and 133 patients were treated with total thyroidectomy followed by radioactive iodine treatment.

Results: The median follow-up time was 223 months (range, 93 to 421 months). The 10-year disease-free survival and locoregional relapse-free survival rates were significantly better than unirradiated controls. 10-year disease-free survival rates for patients in the radiation therapy and no radiation therapy groups were 84.3% and 56.7%, respectively ($p = 0.049$). 10-year locoregional relapse-free survival rates for patients in the radiation therapy and no radiation therapy groups were 83.9% and 60.8%, respectively ($p = 0.037$). The overall survival rate and distant relapse-free survival rate were not different between the two groups. Multivariate analysis showed that adjuvant radiation therapy was an independent prognostic factor for locoregional relapse-free survival ($p = 0.044$).

Conclusion: adjuvant external beam radiation therapy should be considered in patients with either pT4 disease or cervical lymph node involvement.

EP-1029

20 v. 25-35 fractions in Oropharyngeal Carcinoma chemolMRT: Could fraction number be de-escalated?

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Purpose or Objective: Highly conformal dose distributions produced by rotational IMRT reliably delivered with daily IGRT raise the possibility that radical chemolMRT for oropharyngeal carcinoma could be delivered in fewer fractions (#) for certain subgroups. The purpose of this study was to compare two cohorts of patients with oropharyngeal carcinoma treated within a single centre: the first treated with a 20# (4 weeks(wk)) schedule, the second with 25-35# (5-7wk) schedules.

Material and Methods: Patients undergoing radical chemolMRT between June 2009 and May 2012 were treated with 55Gy/20# over 25 days to PTV1 with synchronous carboplatin or cetuximab (20# cohort). Similar patients were treated between June 2012 and April 2014 with one of three schedules 64Gy/25# over 32 days, 65Gy/30# over 39 days or 70Gy/35# over 46 days to PTV 1 with synchronous cisplatin or cetuximab (25-35# cohort). The local control (LC) and overall survival (OS) of these two cohorts were compared using the log-rank test.

Results: The minimum time elapsed from treatment in all patients was 18 months. There were 86 patients in the 20# cohort: median age 58 years; p16+ 60 (70%); T4 28 (33%); N2C/N3 16 (19%). There were 77 patients in the 25-35# cohort: median age 59 years; p16+ 54 (70%); T4 24 (32%); N2C/N3 16 (22%). The 18 month local control in the two cohorts respectively was 86% v. 88% ($p=0.69$). The 18 month overall survival was 85% v. 89% ($p=0.41$). If the two cohorts were restricted to those patients who were p 16+ve, T1-3, no neo-adjuvant chemotherapy and platinum agent used synchronously the corresponding figures (n= 26 for 20# cohort v. n=38 for 25-35# cohort) for local control were 92% v. 95% ($p=0.34$) and for overall survival 96% v 100% ($p=0.22$).

Conclusion: Although further follow up and late toxicity data is required, the similarity in results seen between the two cohorts in this study warrant the testing of the 20# schedule with synchronous cisplatin in a randomised setting in good prognosis oropharyngeal patients. This similarity in the endpoints studied is evidence against synchronous chemotherapy acting to reduce accelerated repopulation

during chemoradiation and further models to account for the effect of synchronous chemotherapy should be investigated.

EP-1030

Sentinel lymph node biopsy in clinically N0 laryngeal cancer: validation and application

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Purpose or Objective: Cervical lymph node dissection for laryngeal cancer patients without clinical and radiologic evidence of regional metastasis (N0) is controversial. Aim of our study was to validate sentinel lymph node biopsy (SLNB) procedure and evaluate its applicability in early T1-2 N0 laryngeal SCC.

Material and Methods: A prospective study conducted at the Lithuanian University of Health Sciences Hospital, with the permission of institutional review board. Inclusion period 2010 - 2013y. Patients with histologically confirmed laryngeal SCC T1-2, N0 were involved. Two phase design: validation phase - SLNB and selective neck dissection (SND) were performed simultaneously; application phase - SND was performed according to SLNB outcome. The end points for SLNB validation phase: sensitivity, specificity, negative-predictive value (NPV). Patients from both phases were followed-up after treatment and compared for recurrence-free survival (RFS). Sentinel lymph nodes (SLN) were located by 99mTc lymphoscintigraphy and gamma probe. Pathological evaluation included hematoxylin and eosin staining and immunohistochemistry. Statistical analysis was performed by using SPSS® v20.0, Clinical Calculator 1, ©Richard Lowry 2001-2015. The Pearson X2 was used for categorical data. Significant p-value <0.05. RFS was investigated performing a log-rank test.

Results: Clinicopathological features presented in table 1. In SLNB validation period we involved 16 pts. The mean number of SLNs per patient was 2.3. Four patients had positive SLN, no false positive results found. 12 pts had negative SLN, one of them had positive SND histological findings. The prevalence of positive lymph nodes was 0.31 (95% CI 0.12-0.58), overall sensitivity was 0.8 (95% CI 0.29-0.98), specificity was 1 (95% CI 0.67-1). NPV of SLNB equal to 0.91 (95% CI 0.59-0.99). During whole study period 46 pts were involved. The median of SLN removed per patient was 2.2. The total neck control rate was 87% and did not differ between validation and application groups (p=0.4). In a mean follow up period of 24 months, mean RFS time for validation group was 42 months (95%CI 37.36-48.28) vs 40 months in application group (95%CI 32.02-48.13), with no significant difference (p=0.43).

Conclusion: More comprehensive study with a larger group of patients and longer follow-up is needed in order to confirm SLNB applicability, however preliminary data revealed SLNB as sensitive and specific with no negative influence on recurrence-free survival.

EP-1031

Does oral mucosa OAR dose predict duration of G3 mucositis following IMRT for oropharynx cancer?

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Purpose or Objective: Various methods have been described to delineate the oral mucosa organ at risk (OAR). Due to uncertainty in the literature, the purpose of this study was to

examine whether dose delivered to two versions of this OAR correlated to the duration of acute grade 3 mucositis in patients with oropharyngeal carcinoma treated with intensity modulated radiotherapy (IMRT).

Material and Methods: 66 patients previously treated with IMRT (55GY in 20 fractions over 25 days to the high dose volume; 46 in 20 fractions to areas at risk of harbouring microscopic disease) and synchronous carboplatin or cetuximab were included in this study. The duration of CTCAE version (v) 3 grade 3 mucositis (G3M) and the duration of strong opiate use (a surrogate for CTCAE v4 G3M) had been prospectively recorded at the time of treatment. Standard and modified oral mucosa OARs were contoured and the following dose parameters derived: mean dose, V55, V50, V45, V40 and V30.

Spearman's correlation was used to investigate for a relationship between the duration of v3 G3M or strong opiate use and these dose parameters for each OAR and 6 additional patient factors: pre-radiotherapy haemoglobin, weight, age, smoking status, use of neo-adjuvant chemotherapy and synchronous chemotherapy (carboplatin v. cetuximab).

Results: No statistically significant correlation of v3 G3M or duration of strong opiate use was noted with the tested parameters with the exception of a trend towards significance with pre-treatment weight (p=0.053). Duration of opiate use was found to be approximately proportional to pre-treatment weight.

Conclusion: This study failed to show a relationship between dose to the standard or modified oral mucosa OAR and the duration of CTCAE v3 G3M or duration of opiate use in patients undergoing IMRT for oropharyngeal cancer. Further work is required to test these models with particle therapy where lower dose distributions to oral mucosa may be achievable. The utility of CTCAE v4 G3M as an endpoint if confirmed in larger studies to be related to pre-treatment weight is questioned by this study.

EP-1032

Unilateral neck radiotherapy in HPV-related tonsillar carcinomas

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Purpose or Objective: Unilateral neck radiotherapy is considered a standard treatment for well-lateralized squamous cell carcinomas of the tonsil related to a HPV infection. Well-lateralized tumours are defined as T0-T2 N0-N2b M0 and not invading the base of tongue nor extending more than 1 cm into the soft palate. We performed a retrospective review aiming to assess the risk of a contralateral neck recurrence in this group of patients with a particular focus on those diagnosed with N2b disease.

Material and Methods: Fifty patients with T0-T3 N0-2b M0 disease (only two had T3 tumours) were treated with unilateral 3DCRT between February 2004 and July 2011. All 50 patients had p16-positive tumours. They all received chemotherapy (concomitant, induction or both) apart from two. Twenty-six patients presented with N2b disease. Median follow-up was 54 months.

Results: Four patients relapsed in the contralateral neck with no evidence of local or ipsilateral regional failure; one with recurrent contralateral retropharyngeal nodes and the rest with contralateral level II-IV nodes. Median time to a contralateral recurrence was 32 months (range, 22-47 months). All 4 patients initially presented with T1 N2b M0 disease. Upon recurrence, 2 of these patients were treated with a salvage neck dissection followed by chemoradiation and 2 with re-irradiation. Both re-irradiation patients developed a further recurrence and one of them died of his